CUSTOMER NO.: 24498
Serial No.: 09/716,722
Office Action dated: March 22, 2005
Response dated: June 21, 2005

PATENT
PF990077

REMARKS/ARGUMENTS

Claims 1-20 are pending in this application with claims 1, 9, 14 and 15 being amended and claims 5-8 and 18 being cancelled.

Objection to the Abstract

The Abstract of the disclosure has been objected to as not being in the proper language and format. The Abstract has been amended in accordance with the comments of the Examiner. In view of the amendments to the abstract, it is respectfully submitted that this objection is satisfied and should be withdrawn.

Objection to the Drawings

The drawings are objected to under 37 CFR 1.83(a) for not having legends. The drawings have been amended in accordance to the comments of the Examiner. Support for the amendments to the Drawings is provided throughout the specification. It is respectfully submitted that no new matter is added by these amendments. In view of the amendments to the drawing, it is respectfully submitted that this objection is satisfied and should be withdrawn.

Objection to Claims 1-4 and 9-17

Claims 1-4 and 9-17 are objected to because there is no element or step for performing functions recited in claims 1-4 and 9-17. Claims 1 and 9 have been amended in accordance with the comments of the Examiner to include implementation steps to record and descramble, thus providing an element or step for performing the functions recited in independent claims 1 and 9 as well as dependent clams 2-4 and 10-17. In view of the above remarks and amendments to the claims it is respectfully submitted that this objection is satisfied and should be withdrawn.

Rejection of Claims 5-7 and 18 under 35 USC § 101

Claims 5-7 and 18 are rejected under 35 USC § 101 because claims 5-7 and 18 are directed to a recording medium containing video stream or video stream.

Claims 5-7 and 18 have been cancelled by this response. In view of the cancellation of claims 5-7 and 18 it is respectfully submitted that this rejection is now moot and should be withdrawn.

Rejection of Claims 5, 7, 9-16 and 18-20 under 35 USC § 102(b)

Claims 5, 7, 9-16 and 18-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Park (U.S. Patent No. 5,757,909).

Claims 5, 7 and 18 have been cancelled.

Independent Claim 9 describes a process for recording on a recording medium, a scrambled digital video stream. The process includes descrambling the stream in such a way as to extract additional data relating to the keys for enciphering this scrambled stream and a step for recording these data on the recording medium. Decrypting data relating to the keys from a scrambled data stream and recording the descrambled data with the scrambled data stream enable faster access to requested data in the scrambled data stream for operating trick modes. Thus, only relevant data is descrambled to obtain data needed for the trick mode, as descrambling all the data of the stream is not necessary.

Park describes a method for preventing users from illegally viewing and copying in a digital video system by setting a descrambling method which decrypts split keystreams adopting a smart card. The method includes a determination step for determining received data having been scrambled, a reproduction step, a recording step, and a transporting step. Figure 14 in Park depicts the recording of the bitstream plus keystream $[S_{KS}(BS) + E^G(KS)]$. This stream is received from the copy protection processor where the stream is encrypted. In the present claimed invention, however, the bitstream and keystream are scrambled, as explained in page 8, lines 19-29 of the

specification whereby claim 9 includes "a step for descrambling the stream". The keystream is decrypted using a decryption algorithm. Consequently, the keys are scrambled before being recorded. Park neither discloses nor suggests "descrambling the stream in such a way as to extract additional data relating to the keys for enciphering this scrambled stream and a step for recording these data on the recording medium", as recited in claim 9 of the present invention.

Furthermore, Figure 15 in Park discloses the encryption of the keystreams $E^G(KS)$ through the copy protection processor to be sent to a smart card. As explained in column 10, lines 3-4 and column 13, lines 16-17 of Park, "the keystreams $E^G(KS)$ are again encrypted with respect to the key information Ak." $E^G(KS)$ is the original encrypted keystream (see Column 13, lines 33-35). As the bitstream KS sent to the ATV decoder (2) has to be decoded, the process by Park can not solve the "trick modes" capability of the present claimed invention. In the present claimed invention the keystream is decrypted using a decryption algorithm. Consequently, the keys are scrambled before being recorded. Park, however, neither discloses nor suggests "descrambling the stream in such a way as to extract additional data relating to the keys for enciphering this scrambled stream and a step for recording these data on the recording medium", as recited in claim 9 of the present invention.

Additionally, Park discloses a further encryption of the encrypted keystream to be stored in a smart card in column 11, lines 35-45. Park does not relate to the recording of video data nor does Park disclose or suggest the keystream was descrambled before being recorded. Park describes in Column 12, line 55-Column 13, line 9 an index code and a further encryption of a keystream to be stored in a smart card. This recording medium is not the same as the one recording the video data, the keystream, as previously discussed, is recorded "encrypted" with the encrypted video data. Thus, Park neither discloses nor suggests "descrambling the stream in such a way as to extract additional data relating to the keys for enciphering this scrambled stream and a step for recording these data on the recording medium", as recited in claim 9 of the present invention.

CUSTOMER NO.: 24498
Serial No.: 09/716,722
Office Action dated: March 22, 2005
Response dated: June 21, 2005

PATENT
PF990077

In view of the above remarks it is respectfully submitted that claim 9 is allowable. As claims 10-16 are dependent on Independent claim 9, it is respectfully submitted that these claims are allowable for the same reasons discussed above regarding claim 9.

Independent Claim 19 describes a process for decoding a scrambled MPEG stream recorded on a recording medium for implementing a special mode ("trick mode"). The process includes reading from the recording medium of scrambled data and additional data other than the scrambled data corresponding to enciphering keys used for scrambling of the MPEG stream. The process further includes descrambling of the MPEG stream data read as a function of the additional data read.

Park describes the use of the transport_private_data field (see transport stream syntax for MPEG2) in an MPEG bitstream to store keystream $E^G(ks)$ in Figure 11. Park further shows the data relating to the keys is scrambled in a partially scrambled bitstream in Figure11C. Additionally, Park discloses the reading of $S_{KS}(BS) + E^G(KS)$, which are the scrambled data of the recorded MPEG bitstream in, column 12, line 55 to col.13 line 9. Park, however, neither disclose nor suggest "the reading, from the recording medium, of additional data other than the scrambled data of the MPEG stream, corresponding to information relating to the enciphering keys used for the scrambling" as recited in claim 19 of the present invention. In view of the above remarks and amendments to the claims it is respectfully submitted that claim 19 is allowable. As claim 20 is dependent on Independent claim 19, it is respectfully submitted that this claim is allowable for the same reasons discussed above regarding claim 9.

In view of the above remarks, cancellation of claims 5, 7 and 18 and the amendments to the claims it is respectfully submitted that there is no 35 USC 112 compliant enabling disclosure in Park showing the above discussed features. It is thus further respectfully submitted that claims 9-16 and 18-20 are patentable over Park and that this rejection is satisfied and should be withdrawn.

Rejection of Claims 6, 8 and 17 under 35 USC § 103(a)

Claims 6, 8 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Park (U.S. Patent No. 5,757,909).

Claims 6 and 8 have been cancelled.

As discussed above, Park neither discloses nor suggests "descrambling the stream in such a way as to extract additional data relating to the keys for enciphering this scrambled stream and a step for recording these data on the recording medium", as recited in claim 9 of the present invention. Claim 17 is dependent on claim 9 and thus, it is respectfully submitted that claim 17 is allowable for the same reasons discussed above regarding claim 9. In view of the above remarks, the cancellation of claims 6 and 8, the amendments to claim 9 and the above comments regarding the patentability of claim 9, it is respectfully submitted that this rejection is satisfied and should be withdrawn.

Having fully addressed the Examiner's rejections, it is believed that, in view of the preceding amendments and remarks, this application stands in condition for allowance. Accordingly then, reconsideration and allowance are respectfully solicited. If, however, the Examiner is of the opinion that such action cannot be taken, the Examiner is invited to contact the applicant's attorney at the phone number below, so that a mutually convenient date and time for a telephonic interview may be scheduled.

No fee is believed due. However, if a fee is due, please charge the fee to Deposit Account No. 07-0832.
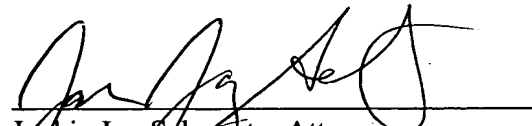
Respectfully submitted,

PHILIPPE LEYENDECKER

JJS:pdf
Attachments

Patent Operations
Thomson Licensing Inc.   By:
P.O. Box 5312   Jackie Jay Schwartz, Attorney
Princeton, NJ   08543-5312   Registration No. 34,721
                                      Tel. No. (609) 734-6866

June 21, 2005

CUSTOMER NO.: 24498
Serial No.: 09/716,722
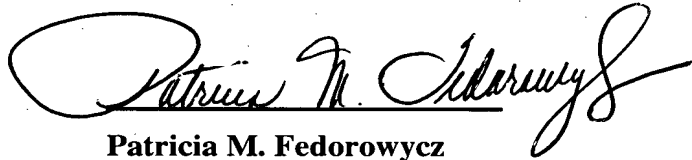Office Action dated: March 22, 2005
Response dated: June 21, 2005

PATENT
PF990077

CERTIFICATE OF MAILING

I hereby certify that this amendment is being deposited with the United States Postal Service as First Class Mail, postage prepaid, in an envelope addressed to Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on:

Date: June 21, 2005

Patricia M. Fedorowycz

IN THE DRAWINGS

Please amend the drawings as shown on the attached sheets.